

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

Reference

- [1] Thoumie P, Lamotte D, Cantalloube S, et al. Motor determinants of gait in 100 ambulatory patients with multiple sclerosis. *Mult Scler* 2005;11:485–91.

<http://dx.doi.org/10.1016/j.rehab.2015.07.253>

CO26-004-e

Verbal fluencies are improved with fampridine treatment in multiple sclerosis



E. Magnin (Dr), Y. Sagawa Junior, L. Chamard (Dr), E. Berger (Dr), T. Moulin (Prof), P. Decavel (Dr)*
CHU, Besançon, France

*Corresponding author.

E-mail address: pierre.decavel@univcomte.fr (P. Decavel)

Objective The aims of this study were to evaluate the effects of fampridine on verbal fluencies in MS patients and to compare the supposed cognitive effect with the gait effect.

Design Our study was a prospective monocentric open label trial. Thirty-one MS patients were included (42% primary progressive MS, 45% secondarily progressive MS, 13% relapsing-remitting MS) with a mean EDSS of 5.43. Assessments of verbal phonological and semantic fluencies were repeated twice (within one week) before fampridine treatment, and twice after fampridine treatment. Gait velocity was measured before and after fampridine treatment. Post-hoc analyses were performed in order to limit the impact of the practice effect.

Results Verbal fluencies were significantly improved by fampridine treatment ($P < 0.05$). Phonological fluency showed greater improvement than semantic fluency after fampridine treatment. No significant difference on verbal fluency performance was observed between gait responders and non-responders groups.

Conclusion The results suggest a specific cognitive effect of treatment with fampridine. There is an improvement in verbal influences mainly phonological, which implies an action on executive functions.

Keywords Multiple sclerosis; Verbal fluencies; Gait speed; Fampridine

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

<http://dx.doi.org/10.1016/j.rehab.2015.07.254>

CO26-005-e

Informal care in multiple sclerosis



E. Bayen (Dr)^{a,*}, C. Papeix (Dr)^b, P. Pradat-Diehl (Prof)^c, C. Lubetzki (Prof)^b, M.E. Joël (Prof)^d

^aAntenne UEROS-UGECAM Île-de-France, service de médecine physique et de réadaptation, HU Pitié-Salpêtrière, Paris, France

^bService Fédération des maladies neurologiques, HU Pitié-Salpêtrière, Paris, France

^cService de médecine physique et de réadaptation, HU Pitié-Salpêtrière, Paris, France

^dLaboratoire d'économie de Dauphine (LEda-LEGOS), université Paris-Dauphine, Paris, France

*Corresponding author.

E-mail address: bayen.eleonore@gmail.com (E. Bayen)

Background Home care for patients with multiple sclerosis relies largely on informal caregivers (ICs).

Methods We assessed ICs objective burden (Informal Care Time, ICT) and ICs subjective burden (Zarit Burden Inventory, ZBI) and their explanatory factors.

Results ICs ($n = 99$) were spouses (70%), mean age 52 years, assisting disabled patients with a mean Expanded Disability Status

Scale (EDSS) of 5.5, with executive dysfunction (mean DysExecutive Questionnaire [DEX] of 25) and a duration of MS ranging from 1 to 44 years. Objective burden was high (mean ICT = 6.5 hours/day), mostly consisting of supervision time. Subjective burden was moderate (mean ZBI = 27.3). Multivariate analyses showed that both burdens were positively correlated with higher levels of EDSS and DEX, whereas co-residency and IC's female gender correlated with objective burden only and IC's poor mental health status with subjective burden only. When considering MS aggressiveness, it appeared that both burdens were not correlated with a higher duration of MS but rather increased for patients with severe and early cognitive dysfunction and for patients classified as fast progressors according to the Multiple Sclerosis Severity Scale.

Conclusion MS disability course and IC's personal situation must be evaluated to understand the burden process and to implement adequate interventions in MS.

Keywords Multiple sclerosis; Informal caregiver; Burden; Multiple Sclerosis Severity Scale

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

<http://dx.doi.org/10.1016/j.rehab.2015.07.255>

CO33-001-e

History of fracture or sprain: New risk factors for falls in persons with multiple sclerosis



M.A. Guyot^{a,*}, A. Grandjean (Dr)^a, H. Khenioui (Dr)^a, P. Hauteceur (Prof)^b, C. Donzé (Dr)^a

^aGroupe hospitalier de l'institut catholique de Lille, médecine physique et réadaptation fonctionnelle, Lomme, France

^bGroupe hospitalier de l'institut catholique de Lille, neurologie, Lille, France

*Corresponding author.

E-mail address: guyot.marc@ghicl.net (M. A. Guyot)

Objective To study the risk factors for falls in patients with multiple sclerosis presenting gait disturbances.

Methods This is a retrospective review of prospectively collected data from a cohort of MS patients followed for gait disturbances between April 2013 and June 2014 in the neurological rehabilitation department. The history of falls, trauma, current treatments and clinical data (disease duration, clinical form, EDSS, motor skills, spasticity, pain) were collected. Univariate and multivariate analyses were performed to predict the risk of falls.

Results One hundred and ninety-six patients (median EDSS: 6; age: 55 years [± 9.3]) were divided into 2 groups: fallers ($n = 92$), non-fallers ($n = 103$). In our model, taking antidepressants, previous fractures (upper limbs, spine), sprains of ankles and knees, impaired visual and brain functions (or mental) of EDSS were predictors of falls (AUC = 0.73; sensitivity = 0.74; specificity = 0.59).

Discussion Balance disorders and falls are among the most disabling symptoms of MS, affecting about 3/4 of patients during the course of the disease. In our study, 47.1% of patients had fallen. These results are similar to those of Cattaneo et al. [1], (54%) and of Finlayson et al. [2], (52.2%). If visual disturbances and antidepressants have been identified as risk factors for falling, prior fracture and sprain were not included in those studies. This could explain the fear of falling in this population. Investigation of a history of fracture or sprain is recommended in the prevention of falls in MS patients with gait disturbances.

Keywords Multiple sclerosis; Risk factor; Fall

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

References

- [1] Cattaneo D, De Nuzzo C, Fascia T, Macalli M, Pisoni I, Cardini R. Risks of falls in subjects with multiple sclerosis. *Arch Phys Med Rehabil* 2002;83:864–7.